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ABSTRACT

The report describes the process and procedures undertaken to recommend topics for a California community college (Oxnard College) faculty resource guide, intended to facilitate test-taking by students with disabilities. An expert panel composed of college administrators, special educators, other faculty members, and community professionals reviewed current literature on the provision of accommodations for disabled students, focusing in particular on visual impairments, motor impairments, speech impairments, specific learning disabilities, and deafness/severe hearing impairments. Federal and state regulations and curriculum issues were also studied, and basic terms identified. Among topics recommended by the expert panel for inclusion in the resource guide were general information regarding adaptations for testing in laboratory settings, the use of readers for the blind, the writing difficulties of motor impaired students, classroom adaptations for deaf and speech impaired students, testing procedures for learning disabled students, and special services available through the testing center. (JW)

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IDENTIFICATION OF TOPICS FOR A FACULTY RESOURCE GUIDE FOR ADAPTIVE TESTING OF STUDENTS WITH DISABILITIES

CURRICULUM AND PROGRAM PLANNING SEMINAR

by

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A PRACTICUM PRESENTED TO NOVA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF EDUCATION

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ABSTRACT

Handicapped individuals of college age are attending postsecondary institutions in greater numbers than ever before. The increased enrollment has been encouraged in part by the provisions of Section 503 and 504 of the Federal Rehabilitation Act of 1973. Many faculty members however, are unprepared for the numbers of exceptional individuals enrolling in their classes.

The purpose of the study was to develop topics for a Faculty Resource Guide intended to offer suggestions to instructors that would assist in making meaningful accommadations for students with disabilities. A review of current literature was presented to an expert panel consisting of college administrators, special education educators, faculty members, and community professionals representing each disability served at Oxnard College and members of local agencies that interface with the college. A final list of suitable topics was decided upon by the panel.

The findings of this study indicated that the panel and the committee perceived that a Faculty Resource Guide for Adaptive Testing of Students with Disabilities was deemed appropriate for instructors at Oxnard College. That information was presented to selected Oxnard College administrators for their consideration in developing the Resource Guide and a related training program for the faculty.

The following recommendations were based on the results and interpretations of the study: 1) that the topics identified in this study be utilized in developing a Faculty Resource Guide for Adaptive Testing for Students with Disabilities at Oxnard College, 2) share the information of the study with other special education professionals and "regular" faculty in the District, 3) disseminate the study findings to the entire administration of Oxnard College and the District Office Administration, 5) share literature with the faculty in the District on reasonable accommodations for disabled students in higher education, 5) that the District Office approve a training program for faculty on Adaptive Testing of Students with Disabilities, 6) expand the proposed inservice training to include invatations to all faculty in the District, 7) plan for an ongoing, comprehensive staff development program to be implemented to ensure the appropriate level of sensitivity, awareness, and technical expertise of all staff members, 8) conduct longitudinal studies of the handicapped in the Venture Community College District to meet the changing needs of the handicapped student, and 9) compile a district-wide detailed cost analysis of all supportive services provided to the disabled student on a yearly basis to ensure adequate services for all handicapped students.

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INTRODUCTION

Handicapped individuals of college age are attending postsecondard institutions in greater numbers than ever before (Black, 1982). The increased enrollemnt has been encouraged in part by the provisions of Section 503 and 504 of the Federal Rehabilitation Act of 1973. Section 503 disallows job discrimination because of a handicap and required affirmative action to employ and advance in employment qualified handicapped individauls. Section 504 is designed to provide equal opportunity to handicapped individuals in any program or activity receiving or benefiting from federal financial assistance. Enrollment patterns of handicapped students illustrates the reasoning behind the passage of Section 504. Handicapped students avoid postsecondary institutions where program accessibility is limited (Chancellor's Office, 1981:47).

The national trend toward increased enrollment of the handicapped is reflected in the enrollment statistics of California and Maryland (Black, 1982). California's enrollment history shows a considerable increase in enrollment of handicapped individuals since 1973, with the community college enrollment showing the greatest increase (Chancellor's Office, 1981:45). The statistics for the Maryland Community Colleges show a less considerable enrollment increase than those of California; however, these

figures are expected to increase (Maryland State Board for Community Colleges, 1979:14). This comparison supports the national findings that the western and southwestern United States, along with Florida, have the largest populations of disabled people who are attracted to these areas because of moderate climate and advanced levels of services for the handicapped (Maryland State Board for Community Colleges, 1979:14).

Colleges admit high risk students for several reasons: 1) to provide opportunities for a college education that otherwise would not exist, 2) to stabilize enrollemnts, and 3) to further affirmative action goals (Abrams and Jernigan, 1984). These admissions introduce a population with serious deficiencies in basic skills; therefore, such admissions have frequently resulted in a high drop out rate (Cope and Hannah, 1975). As a result, many institutions have adopted support service programs to increase the retention rate of these students (Sikula, 1979).

Keeping with the mandates of the Rehabilitation Act of 1973, Oxnard College Special Education Office is in the process of developing a training program to educate faculty in working with mainstreamed disabled students in their classrooms. This means offering special test considerations for students with verified disabilities categorized as follows: 1) visual impairment, 2) motor impairment, 3) speech impairment, 4) specific learning disabilities, 5) functional disabilities, and 6) deafness or hearing impairments. In

order to effectively implement this training program at Oxnard College, topics for a Faculty Resource Guide for Adaptive Testing of Students with Disabilities will need to be developed.

Statement of the Problem

Oxnard College Disabled Students Center, serves over 250 disabled students a year. The Ventura Community College District of which Oxnard College is one of the three colleges, serves over one thousand disabled student annually. Today's disabled population make up the largest and fastest-growing minority in the nation (Richart, 1986). In California, nineteen percent of the sixteen through sixty-four age group are handicapped (Richart, 1986). The Ventura Community College District provides educational opportunities to the member's of it's community and has been offering services and programs to disabled students enabling them to be mainstreamed into college classrooms and courses. However, many faculty members are unprepared for the numbers of exceptional individuals enrolling in their classes (United States Department of Education, 1979). A Faculty Resource Guide for Adaptive Testing of Students with Disabilities was deemed appropriate by the Special Education Advisory Committee. The topics that were selected for the Resource Guide were intended to offer suggestions for faculty to assist in making meaningful accomodations for students with disabilities.

Significance of the Study to Oxnard College

The development of topics for a Faculty Resource Guide for Adaptive Testing of Students with Disabilities will not only benefit the professional educators at Oxnard College, but the disabled students that they work with as well. The topics selected for the Faculty Resource Guide were designed to assist faculty in increasing their knowledge of federal and state regulations as well as those of the California State Chancellor's Office in working with disabled students. The Resource Guide, more importantly, will assist faculty in making meaningful accommodations for students with disabilities in their classroom.

The significance of this study could have a great long-term impact on Oxnard College. Special test conditions for students with verified disabilities have been documented by federal and state laws and regulations. Additionally, the State Chancellor's Office has mandated that "reasonable accommodations" be made for disabled students in their educational pursuits.

Relationship of the Study to the Seminar

The curriculum and Program Planning Seminar keynoted several areas on instructional materials. Nova University Center for Higher Education requires Practicums that are

related to seminar content. This study was directly related to the Curriculum and Program Planning Seminar as indicated by Gagne and Briggs (1979) who explained the importance of teaching methods and instructional materials when planning a curriculum. Additionally, Herrscher, Mizell and Pautler (1986:10) stated, "The end result of the curriculum development process is the curriculum development plan. It is a plan, however, for a particular situation." The development of a plan for testing students with disabilities and what it should contain was the focus of this Practicum.

Literature Review

The foundation for the study for the identification of topics for a Faculty Resource Guide for Adaptive Testing of Students with Disabilities was based on a review of related and appropriate literature pertaining to making meaningful accommodations for students with disabilities. Although no study exactly duplicated this practicum, enough similar studies and related information was obtained to provide a background of the subject area.

Accommodations for students with disabilities may range from architectural modifications to support services in the classroom (Black, 1982) The underlying purpose of these adjustments is to enable a student to participate fully in their academic experience at a college or university and be evaluated on the basis of his/her ability not

disability (Salend, 1985). Oliver (1986:1-2) explained the Los Angeles Mission College philosophy of disabled students as follows:

> The Handicapped Programs at each college share the same goals and objectives. Our mission is to provide those services necessary to give all qualified handicapped students an equal opportunity to succeed in regular college classes, campus activities, and career goals.
>
> We provide reasonable accommodation in programs and activities without lowering the standards of the individual course or the college as a whole. Serivces or programs will not be provided if or when they are not facilitating measurable progress.
>
> All activities and services available to the regular college students are available to students with disabilities.
>
> Before a student is assigned to a "Special Class" or Program, the College, in concert with the student, will determine that support services in regular classes are not adequate to meet the particular student's needs.
>
> Participation in any aspect of supportive services or programs is voluntary.
>
> The student shall not continue participation in services or programs beyond the time reguired to meet his or her needs.
>
> Students are guaranteed freedom of choice, equal access to all activities and courses offered by the college, the right to privacy, the right to review personal information and records and all other rights available to the general college population.
>
> And finally, no program or course shall be denied a student without due consideration of the student's potential and abilities and the additional assistance provided by adaptive or sensory aids or other support services or programs.

The results of a study conducted by Abrams and Jernigan (1984) indicated that the California Community

Colleges are: 1) serving college students with a variety of handicapping conditions, 2) providing a multitude of special services at no cost to students, 3) lacking criteria to determine eligibility for program services, 4) funding programs from federal, state, and university sources, and 5) experiencing a lack of funds, staff, and resources to adequately service the handicapped college population.

Services/Program Goals

According to California Education Code, Section 56064.4, the goals for Special Education programs are listed below. There is at least one program goal for each area. They are as follows:

1. Special Facilities: The District's Handicap Programs shall assure equal physical access to the educational opportunities offered by the District for all eligible handicapped students by providing adequate space, special equipment and/or furniture, and by removing identified architectural barriers.
2. Special Education Materials: The District's Handicap Programs will assure equal academic access to all eligible handicapped students by providing special support personnel and resources as needed.
3. Educational Assistance: The District's Handicap Programs will insure equal educational

opportunities for all eligible handicapped students by providing special support personnel and resources as needed.

4. Mobility Assistance: The District's Handicap Programs will assure equal access to the educational opportunities offered at the District for all eligible handicapped students through the provision of designated personnel or equipment to assist those students to move about efficently in the educational setting on campus.
5. Transportation: The District's Handicap Programs shall attempt to insure equal physical access to the educational opportunities offered by the District for all eligible handicapped students by attempting to provide transportation around and to and from the campus when other means of transportation are not available or usable by the handicapped students.
6. Program Developmental Services: The District's Handicap Programs will insure equal physical, academic and vocational opportunities for all eligible handicapped students by providing an efficient program management system which will implement the provisions of Educational Code Section 18151

Legislation

Clearly the most significant factor leading to the development of college programs for disabled students has been strong federal legislation (Cordoni, 1982). The two most important laws are Public Law 94-142 (PL 94-142), and Section 504 of the Rehabilitation Act of 1973 (PL 93-112). PL 94-142 has been referred to as the "Bill of Rights" for the handicapped because it guarantees to all handicapped individuals, including the learning disabled students a free and appropriate education through the secondary level. As a result of this law, many disabled students attended regular high school classes with students who were not disabled (Blalock, 1980). As they did, they aquired many of the academic skills that would enable them to attend college. Pl 94-142 has, therefore, had an indirect effect on the development of college programs for the learning disabled. It has helped to produce a large number of disabled students with the necessary academic skills and the desire to attend college.

As a natural outgrowth, many colleges have responded by developing programs to enable these students to do so (Cordoni, 1982). Based upon mandates of Section 504 of the Rehabilitation Act, it stipulates that:

> No qualified handicapped person shall, on the basis of handicap, be excluded from participating in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity which receives or benefits from Federal assistance (Federal Register, 1977).

Many disabled students are seeking full implementation of this statement in college settings (Gerber, 1981). Additionally, the availability of support services at the secondary level has contributed to the expectation that continued service will be provided in postsecondary enviroments (Vetter, 1983).

Visual Impairment/Blindness

The academic problems that face blind and/or visually impaired students stem from both the obvious physical limiations encountered as a result of their disability and language limitations which tend to complicate matters even further are also common with this group (Woo, 1986). Crucial to the success of these students are instructional programs geared specifically for the blind (Woo, 1986). The success of the mainstreamed blind student depends on specialized instructional programs (Rusalem, 1962). Special Education classes and/or support services that are offered in many institutions to support the blind student are: 1) Braille, which is a specialized reading system comprised of raised dots, 2) Optacon, that enables blind students to access the printed page through the use of an electronic device which converts ink print to tactually descriminable representation letter by letter, 3) Kurzweil Reading Machine Techniques, that is a reading machine that is a computer base and actually provides blind students with a voice output of their reading material, and 4) special

Personal Development Classes to assist with the adjustment to college life. Additionally, readers and note-takers work very well to support the blind and visually impaired student to fully insure academic success when these students are mainstreamed into classes (Woo, 1986).

A very necessary adjunct to the instruction process of these students is the costly state of the art technology for the blind (Woo, 1986). Access to special equipment is essential if the blind and visually impaired are to independently complete their course work (Rusalem, 1962). Such special devices include: Optacons, braillers, talking computers, talking calculators, enlarging machines, tape recorders, tape duplication machines, special typewriters, and a library of brailled materials. However, Braille is less often used for reading by college students than once was the case (United States Department of Health and Human Services, 1981). Although it is still an essential tool, there is an increasingly heavy reliance on recorded books (Texas Technical University, 1977).

The following are some guidelines for orally administering a test to a blind student:

1. Allow the student and test reader to work in a room where they will not be disturbed by others.
2. Repeat questions as many times as the student requests. (This is the same as a sighted student re-reading a question as often as he/she wishes).

3. Repeat completed answers as often as the student requests. (This is the equivalent of a sighted student checking his/her answers, or using completed answers, or using completed answers to help with other questions).
4. Long questions and answers on multiple choice tests may be particularly confusing. Reading the question and pairing it with each choice may help reduce confusion.
5. Since oral administration is more time consuming than written administration, extra time should be allowed. Both faculty and the student should reach a mutually satisfactory agreement on time prior to the test (Woo, 1986).

Motor Impairments

A number of conditions may interfere with such activities as writing, typing, carrying books, handling equipment in the laboratory, note-taking and self-care (Rusalem, 1962). A number of conditions may cause limitations in the use of shoulders, arms, hands, and/or fingers, such as: arthritis, amputations, accidents, poliomyelitis, cerebral palsy disorders of the nervous system and strokes (Powell, 1986).

Use of hands, especially, is so often perceived as essential to college work that it is sometimes difficult for educators to understand how it is possible for a student

with severe manual limitations to function in college (Powell, 1986). Yet many individuals have succeeded and the success is due to rehabilitation services that the student received (Richart, 1986). Additionally, much depends on the attitudes of the colleges and where the student is enrolled (Black, 1986).

Where fine movements are required such as in handwriting are beyond the student's capacity, note-taking may be difficult, it not impossible (Rehabilitation Group, Inc, 1979). Some students can ask others in their class to make duplicate notes, or tape-record class lectures (Oliver, 1986). This does have disadvantages, in that many instructors have to relax their usual insistance that each student be responsible for their own notes (Abrams and Jernigan, 1984).

When taking tests many motor impaired individuals are either 1) unable to write, 2) fatigue quickly while writing, or 3) write much more slowly than unimpaired students (Rehabilitation Group, Inc., 1979). Therefore, students who are unable to write must request assistance in recording answers. This is a time consuming process and instructors must be willing to establish mutually agreeable testing procedures (Abrams and Jernigan, 1984). Additionally, manual limitations may be so extensive that it is impossible or unsafe to handle laboratory equipment (Rusalem, 1962). Therefore, reasonable accommodations of laboratory stations may be required to make equipment and

material accessible. Many laboratories are conducted on a student team basis, in such cases, the disabled student can work with another student performing some of the routine jobs whenever possible (Rusalem, 1962).

Speech Impairment

Speech impairments for the most part, only call for some minor classroom adaptions in situations relying on class discussion, question session or student presentation. The following are some general guidelines established by the California State University Northridge, Disabled Students Center (1986) when working with speech impaired students:

1. Impaired speech may be slower than unimpaired speech. It is important that speech impaired students have an equal opportunity to voice their reactions or questions even if it mean alloting extra time.
2. It is important to overcome the urge to interrupt or try to complete an impaired student's train of thought. Trying to anticipate the question being asked can be embarrassing and/or frustrating if the completion of the sentence was not the question or point trying to be made.
3. There may be situations where the words or phrases the person is using are not understood. Don't be hesitant to ask for repetition of words or phrases; students with speech disorders would

rather repeat a message in order to communicate than have someone ignore or pretend to understand what they are saying. At times it is helpful to summarize the message and check with the student for accuracy.

4. With increased exposure to people whose speech is impaired, ability to understand their speech will improve.

Specific Learning Disabilities

Learning Disability, is a hidden handicap. Unlike the person who uses sign language or walks with crutches, the learning disabled person shows no visable characteristics of the disability (Hartman and Krulwich, 1984). The casual observer does not realize that difficulty in processing information causes the person to cope differently from others in learning and living situations (Vogel and Adelman, 1981). The following behavioral symptoms have been consistently associated with the learning disabled population: 1) hyperactivity, 2) short attention span, 3) auditory or visual perception disorders, 4) motor problems, 5) mixed lateral dominance, 6) memory disorders, 7) language disorders, and 8) social perception problems (Frostig and Maslow, 1973). Individuals with learning disabilities may have one or more of these characteristics in different combinations and with varying degrees of severity (Marsh, Gearhart and Gearhart, 1978).

Learning disabled college students typically manifest an array of academic problems including deficits in the areas of reading, writing, oral language, math and study skills, as indicated earlier. It is also apparent that social-emotional traits are, at least, of equal concern. Social characteristics that have been identified include low self-esteem, dependency, poor attention, emotional instability, and social imperception resulting in communication difficulties (Polloway, Smith and Patton, 1984). These combined needs suggest that interventions for this population must be varied and comprehensive. Training programs, therefore, must be cross-disciplinary with input from counseling, school psychology, higher education and rehabilitation, as well as special education. Competencies for direct service personnel include assessment (academic, social and vocational) of adults, implementing academic and learning strategies, interventions, individual and group counseling, and consultation with college faculty. Therefore, students performing significantly below expectancy for a variety of reasons require special support services arranged through Special Education Offices (Ostertag, 1986).

Learning disabled students, in many cases, have difficulty with reading and writing (Johnston, 1984). The use of a tape recorder in class and/or a reader for laboratory and study is essential for the majority of learning disabled students (Hartman, 1982) Special testing

procedures are required and are very similar in nature to those recommended for visaully impaired students (Clark, 1981).

Functional Disabilities

Students with exceedingly limiting orthopedic and neurological disabilities may depend on the wheelchair as the major aid to mobility. Many of the problems of the wheel-chair student parallel those of students who use canes or crutches (Black, 1982). To benefit from a college program, wheelchair students must have access to the buildings in which essential college activities are housed (Rusalem, 1962). If a student can enter and leave such buildings with minimal or no assistance, and no motor impairments are present to impede writing, notetaking, etc., there should be few difficulties in mainstreaming of these sutdents on college campuses (United States Department of Education, 1979).

Deafness and Severe Hearing Impairments

Deaf students are those who do not use hearing in the learning process (Schein and Delk, 1974). The physical loss in this group occurred prior to the acquisition of language. As a result, both speech and language were learned through special instruction in childhood and adolescnece. Their speech, although often readily understood, has a characterisitc quality to it (Rusalem, 1962). In some

cases, the language handicap persists throughout life (Rusalem, 1962). In college, they may function through spoken messages, when necessary (Crozer, 1986).

Language assessment at the time of admission is highly desirable (Crozer, 1986). Through the use of reading and other language tests, every effort should be made to ascertain the current language development of the deaf student (Schein and Delk, 1974). In view of the fact that much college level learning takes place through the medium of words, serious language deficiencies can constitute major handicaps in the college curriculum (Schein and Delk, 1974). Some deaf persons achieve work fluency of high order and others do not. The latter group may need educational and vocational plans. For some deaf students, the language handicap can be more restricting at the higher educational levels than the absence of hearing, per se (Schein and Delk, 1974).

A good deal of college learning takes place on an abstract level. Much of it is in the realm of ideation and concept formation. As a group, deaf students tend to function best in concrete situations in which direct experience is possible (Rusalem, 1962). Numerous deaf people are able to surmount this problem and function quite successfully in the areas of abstraction required in collge work. Others, however, may have profound difficulties in this area. As a result, in working with deaf students, the testing services of a college or university can be helpful in assessing the

the student's ability to work in the realm of abstraction (Crozer, 1986). In cases in which evaluation results are doubtful or negative, it would be wise for college personnel to consult psychologists who specialize in working with deaf individuals. In this way, the appropriate capacities and limitations may be better understood and may serve more effectively as a basis for eductional planning for the student (Schein and Delk, 1974).

Curriculum Issues

When dealing with the special curriculum problems of the disabled students, they should be required to take examinations that are planned for all ther students (United States Department of Education, 1979). The adjustments should not be made however, in the nature of the test, but in the manner of administering the test. With the assistance of adaptive devices, flexible time limits and supportive faculty, virtually any disabled student is capable of managing the physical aspects of a test (Black, 1982). If he/she is unable to do so, real questions may be raised about his/her capacity to do college level work.

Generally speaking, instructors need not make such major adjustments as preparing special equivalent forms, or administering the test himself/herself (Chandler, 1985). This general procedure cannot be followed under all instances. For example, the disabled student cannot be expected to be adapted to "surprise" quizzes, frequent short

classroom tests, and group or oral examinations (Rusalem, 1962). When these techniques are used, substitute measures may have to be found for the severly disabled students (Rusalem, 1962). Furthermore, when a test is prepared with a "speed factor" in mind it sould be remembered that many disabled students are likely to be slower in completing it because of their physical limiations and the techniques used in administering it (Black, 1982). For example, when a fifty-item objective test is read to a blind or learning disabled student, the oral reading requires more time than the silent reading by other students. Or if a student with a severe motor impairment dictated his responses to an authorized instru tional aide this may require more time than if he/she was able to write or type the responses.

It was evident from the literature review that the intent for an adaptive testing for students with disabilities is not to have students exempted from examinations or given substitute assignments such as preparing special papers. In fact, there was little if not justification for this course of action. The academic performance, of disabled students as indicated by the literature review, must be evaluated in the commonly accepted framework of the institution with the respect to curriculum. A Practicum designed to identify topics for a Faculty Resource Guide for Adaptive Testing of Students with Disabilities was deemed appropriate.

PROCEDURES

An extensive review of literature was conducted to determine suitable topics for a Faculty Resource Guide for Adaptive Testing of Students with Disabilities. The literature review included readings on visual impairments, motor impairments, speech impairments, specific learning disabilities, deafness, hearing impairments and federal and state regulations including mandates imposed by the State Chancellor's office. Special emphasis and an additional literature search was focused on those readings emphasizing reasonable accommodations for students with disabilities in the community colleges.

The resources that were utilized for the literature search included the libraries of the University of Califonia Los Angeles, and California State University Northridge. A Lancers Database search was also utilized through the Office of the Los Angeles Superintendent of Schools.

The procedures undertaken for this study included a series of group discussions with the Special Education Advisory Committee at Oxnard College. These experts were college administrators, faculty, community professionals representing each disability served at Oxnard College, and members of local agencies that interface with the college, who are members in good standing for the 1986-1987 academic year. The selected list of topics that were reviewed and

critiqued by this group were derived from the review of literature and from the current state and federal regulations as well as mandates issued from the State Chancellor's Office. The panel of experts met once a week for three weeks. The first meeting consisted of a review and revision of the materials. A second meeting concluded with a list of suitable topics for a Faculty Resource Guide for Adaptive Testing for Students with Disabilities (Appendix A). The third meeting consisted of a presentation of the final selection of topics to Oxnard College Administrators.

Definition of Terms

In initiating the study, some basic terms were identified to help understand the intent and purpose of the study and assist in interpreting the findings. The selected terms are listed below:

1. Disabled Student: Any person with a verified disability, meeting the admission requirements of the California Community College System (State Chancellor's Office, 1986).
2. Visual Impairment: There are two basic categories of visual impairment: 1) partial blindness, and 2) legal blindness. Total blindness is the lack of vision. Partial or legal blindness is severly limited vision, such as acuity worse than 20/200 corrected, or severe "tunnel vision" (Rusalem, 1962).

3. Speech Impairment: Where speech is slower than "normal" or where words or phrases the person is using are not understood (Rusalem, 1962).
4. Motor Impairment: The partial or total loss of the function of a body part, usually a limb or limbs. This may result in muscle weakness, poor stamina, lack of muscle control, or total paralysis (Powell, 1986).
5. Learning Disabilities: There are many catagories associated with learning disabled college students. They are usually classified and discussed under seven major catagories: Cognition, Language, Perceptual and Motor Skills, Academic Work, Work Study Habits, Social Skills and Emotional Development. There is overlap of the characteristics across the categories, and no one learning disabled college student will have all the characteristics noted (Hartman and Krulwich, 1984).
6. Functional Impairments: Students who are exceedingly limited with orthopedic and/or neurological disabilities depending on a wheelchair as the major aid to mobility. Or students using canes or crutches (Black, 1982).
7. Deafness or Severe Hearing Impairments: Those students who do not use hearing in the learning process (Schein and Delk, 1974).

8. Mainstreamed: Disabled students attending "regular" college classes or programs (State Chancellor's Office, 1986).

Limitations of the Study

The study had limitations that were identified. These limitations placed restrictions upon the reliability, validity, applicability, or general usefullness of the study. In considering the intent and scope of this study, the following limitations were identified:

1. The study was limited to only the identification of topics and not the entire curriculum development of materials needed for the Faculty Resource Guide.
2. The study was limited to volunteer members of the Special Education Department Advisory Committee to decide on suitable topics for the Faculty Resource Guide.
3. Moderator variable of the participants of the Advisory Board members were not considered in this study. Variables such as previous knowledge and/or participation in designing adaptive testing of students with disabilities.

Basic Assumptions

In initiating the study, some basic assumptions were made in relation to this study. It was assumed that:

1. All certificated special educators who participated on the advisory committee were familiar with adaptive testing of disabled students for their specialization.
2. All certificated special educators participating on the advisory committee were aware of the District's policy regarding mainstreamed disabled students.
3. All certificated special educators had an understanding of their role in facilitating adaptive testing the the "regular" classroom.

FINDINGS

Findings from the Review of Literature

For this study, mainstreamed disabled students were defined as those individuals who are personally ready for college work. An intensive review of the liferature focused on educational services that were being extended with an intensity and comprehensiveness not previously known in higher education. Additionally, disabled persons greater acceptance in the community has encouraged them in their college planning (Black, 1982). Confronted by the academic and social needs of disabled students, the findings indicated that colleges and universities have generally followed one or more of three patterns in handling the problem: 1) exclusion, 2) laissez faire, and 3) modification (Rusalem, 1962:81). They are noted below:

1. Exclusion: If it is believed that the disabled student is unable to function adequately in the subject matter of a learning experience, or that he/she is incapable of performing certain tasks, or that he/she constitutes a safety hazard in certain respects, the experience will be omitted from his/her program. As a rule, if he/she is excluded from one or more aspects of a total field, the remaining aspects, which may be well within his/her physical capacities, will also be

omitted from his/her program, especially in subjects in which one course builds on another. usually, plans for supplementation or substitution are not made.

2. Laissez Faire: When the disabled student is admitted to the activity, no effort is made to adapt it ot his/her needs. He/she is left to sink or swim. If he/she develops his/her own resources for coping with the situation, he/she may salvage a great deal from it. On the other-hand, if he/she cannot adjust to the given reality, he/she fails. Institutions of higher learning that adopt this laissez-faire technique are inclined to hold disabled students more or less firmly to the existing curriculum, with few attempts to waive certain learning experiences.
3. Modification: If it is determined that a student, because of physical problems, cannot function adequately in a particular situation or area, one of two steps may be taken. The student may be admitted to the activity after certain modifications in its structure have made it possible for him/her to complete successfully and to acquire the desired learning. Or the institution may waive a particular requirement and, after careful consideration, prescribe another which is considered an adequate

> substitute. In effect, the institution takes responsibility for reducing barriers to the student that are inherent in its regular curriculum. Ideally, these modifications do not result in a lowering of standards. There are essentially ways of circumventing a barrier, achieving mastery of a subject-matter area through slightly different means.

A review of the works on adaptive testing and reasonable accommodations for disabled students as authored by (Black, 1982; Abrams and Jernigan, 1984; Cope and Hannah, 1975; Ostertag, 1986; Schein and Delk, 1974; and Rusalem, 1962) were utilized in producing the topics.

Findings from Panel Review

The first meeting of the panel of experts consisted of an explanation of the study being conducted. The panel then reviewed, revised, and made additions to the review of literature provided. Each of the experts were asked to make suggestions as where to begin in developing topics for the Resource Guide. The experts unanimously agreed that all disability groups covered in the review of literature must be included. The members also felt that mention of the laws pertaining to "reasonable accommodations" for disabled students in mainstreamed classes must also be mentioned in the guide.

Suitable adjustments involving a shared responsibility between the classroom instructor and the student was stated to be the main area of interest to the panel. They suggested that at the start of each semester instructors make a general announcement that they are willing to discuss each student's special needs. They felt that this would encourage students with invisable disabilities to communicate their special needs early in the semester.

The panel concluded the initial meeting in stating that they liked the topics identified and felt those selected were of key importance to them. They expressed a desire to take the review of literature with them and meet again after having a chance to review it in more depth. A second meeting was scheduled to finalize the list of topics.

The second meeting of the advisory committee, panel of experts, met one week after the initial meeting, as previously scheduled, the panel concurred on including the following topics to the list, they were: 1) Introduction to the Faculty Guide, 2) Purpose, 3) Legislation, 4) General Information on Adaptive Testing, 5) General Information Regarding Labs, 6) Testing of Visually Imparied/Blind students, 9) Learning Disabilities, 10) Deafness/Hearing Impairments, 11) Disabled Students Center, Testing Services, and 12) Request for Proctoring Service Form.

The meeting concluded after the final selection of topics occurred. The third meeting was scheduled one week

later and the appropriate administration were invited to that meeting due to the general consensus of the board members to present the topics.

The final list of topics (Appendix A) was presented as planned at the third meeting to the appropirate administrators in attendence. The Advisory Board Chair stated that it was the unanimous decision of the committee to develop a training program for faculty from this identified list and that their support was needed to encourage faculty participation. A favorable reaction was noted by the administration and discussions began regarding the faculty training program. However, a concern for the cost and the staffing of the training was expressed as a factor that would delay the training date.

In conclusion, it was agreed that the information obtained was so valuable that the Special Education Advisory Committee should share it with the other two campuses in the District. The committee also decided to attempt to expand the faculty training program to a District inservice, rather than a college event. This decision was going to be made as a formal proposal to the District Office.

DISCUSSION, IMPLICATIONS and RECOMMENDATIONS

The results of this study indicated that it is apparent that the number of handicapped students is increasing and will very likely continue to increase in the years ahead. Costs for the provision of special services to the handicapped vary greatly.

As increases in the handicapped student population occur, the level of available extended support is shrinking and state support remains constant. It is becoming increasingly difficult for colleges to absorb the excess costs for minimal support to disabled students. Without additional funding, it will be nearly impossible to maintain the current level of services or to provide additional services as needed. All campus faculty being willing to work in a greater way with the mainstreamed disabled student is a way to cope with funding issues.

Community colleges need state funding mechanisms for special services to handicapped students, however. Such funding formulas will assist community colleges in providing the disabled with an equal opportunity for success in their purusit of higher edcatuion. The costs for equal educational opportunities for handicapped students should be viewed in terms of the benefits that are received by the individual

as well as society. The willingness to make reasonable accommodations in the higher education classroom, is a first step.

The available literature suggests that colleges and universities will be asked to serve a growing number of disabled students in the next decade. The research regarding reasonable accommodations for disabled students in colleges and universities appeared to be limited and precise data did not seem to be readily available for this study. Additional research may determine the scope and effects of faculty utilizing adaptive testing with disabled students.

The implications of this study can be far reaching for both faculty and administration. The faculty should know that it is not only important for them to "accept" disabled students in their classroom, but to also be an active participant in their educational process as well. Administrators need to become aware of their role in facilitating this relationship by allocating funds for inservice trainings, publications and research in the field The implications for the faculty to accept that they can play an intregal part in a disabled students collegiate success can have a tremendous impact on the institution in the retention of this population alone. The administration should take note of this study and its implication on the total institution.

Based on the results and interpretation of this study, the following recommendations are suggested:

1. That the topics identified in Appendix A be utilized in developing a Resource Guide for Adaptive Testing for Students with Disabilities at Oxnard College.
2. The Special Education Advisory Committee at Oxnard College share the information of this study with other special education professionals and "regular" faculty in the District.
3. The special Education Department disseminate the study findings to the entire administration of Oxnard College and the District Office Administrators.
4. That communication and literature be shared with the faculty in the District on reasonable accommodations for disabled students in higher education.
5. That the Oxnard College Special Education Administrator along with the Continuing Education Department approve the training program(s) for faculty on Adaptive Testing of Students with Disabilities as recommended by the expert panel, utilizing topics listed in Appendix A of this study.

6. That the proposed Inservice Training Program include invitations to all faculty within the District.
7. That a plan for an ongoing, comprehensive staff development program be implemented to ensure the appropriate level of sensitivity, awareness, and technical expertise of all staff members.
8. That longitudinal studies be conducted as a major step toward meeting the changing educational needs of the handicapped student.
9. That a detailed cost analysis of all supportive services provided to the disabled student be complied by the District on a yearly basis to ensure adquate support services for all handicapped students needing assistance.

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APPENDIX A

APPENDIX A

IDENTIFICATION OF TOPICS FOR A FACULTY RESOURCE GUIDE

1. Introduction: The Oxnard College Disabled Student Department offers numerous services, including specialized test arrangements to students with these disabilities:
   1. Visual Impariments
   2. Motor Impairments
   3. Speech Impairments
   4. Learning Disabilities
   5. Functional Limitations
   6. Deafness and Hearing Impairments

   Special test considerations for students with verified disabilities are documented by federal and state laws and regulations as well as by the mandates imposed by the California State Chancellor's Office. The most common request is for extra times. This is considered by law to be a "reasonable accommodation." Requests for other conditions will vary according to the nature of the disability (The Center for Student Life and Counseling Services at the University of Misouri-Columbia).

2. Purpose: The Faculty Resource Guide for Adaptive Testing of Students with Disabilities is intended to offer suggestions for faculty to assist in making meaningful accommodations for students with disabilities (Special Education Advisory Committee, Oxnard College, 1987).

3. Legislation: Based upon mandates of Section 504 of the Rehabilitation Act of 1973, it stipulated that "no qualified handicapped person shall, on the basis of handicap, be excluded from participating in, be denied the benefits of, or otherwise be subjected to descrimination under any program or activity which receives or benefits from Federal assistanct" (Federal Register, 1977: 2678).

4. General Information on Adaptive Testing: Sensory impairments and some motor impairments will require alternative testing procedures, extension of time for completing, or a separate testing enviroment. Discuss testing procedures with the student to insure appropriate testing format and procedures (Office of Disabled Students Services, California State Univeristy Northridge, 1986).

5. General Information Regarding Labs: Having a disabled student in a lab situation does not automatically mean he/she cannot perform lab techniques. It may be a matter of 1) adapting equipment so the student can use it alone, 2) pairing the student with another student, 3) pairing the student with an assistant. Whatever the choice, incorporate the means by which the student can remain most actively involved. In laboratory situations it is important to ascertain and discriminate between what is procedure and what is actually the knowledge to be learned. More specifically, if a student is unable to perform a lab technique, a reasonable expectation may be that he/she can adequately describe and explain the procedure involved (Office of Disabled Students, California State University, Northridge, 1986; Rusalem, 1962).

6. Visaully Impaired/Blind Students: Many blind students need a sighted person to read and record text items for them. Most of these students prefer to have their test read to them by their own readers, as the readers are familiar with the required procedures. Readers are paid employees of the blind person and conduct reading sessions in a progressional, businesslike manner (Woo, 1986).

   For specific guidelines for orally administering a test to a blind student, contact the Disabled Student Center.

7. Motor Impaired Students: Some motor impaired students are either 1) unable to write, 2) fatigue quickly while writing, or 3) write much more slowly than unimpaired students. Any of these three situation necessitates a change in usual test procedures. Students who are unable to write will request help recording answers. Since this procedure is time consuming, additional time should be granted. Confer with students to extablish mutually acceptable testing procedures (Black, 1982).

8. Speech Impaired Students: Some general guidelines can be followed when working with speech impaired students and are available in the Disabled Student Center. Speech impairments, however, may call for some minor classroom adptations in situations relying on class discussion, question session, or student presentations (Abrams and Jernigan, 1984).

9. Learning Disabilities: Students may perform significantly below expectancy for a variety of reasons. Disabilities such as dyslexia and developmental aphasia require supportive services. Learning disabled students have difficulty with writing and many have reading difficulties. They require the use of a tape recorder in class and a reader for laboratory and study special testing procedures are required similar to those recommended for visually impaired students. It is important to discuss with the student his/her specific needs. The Learning Disabilities Specialist can offer assistance when working with these students (Ostertag, 1986).

10. Deafness/Hearing Impairments: These students will require no more than an interpreter to relay verbatem test instructions and/or address specific exam related question(s) to the instructor. Some deaf students are skillful lip readers, however, at best, lip reading is an imperfect tool in the classroom. Faculty can assist the deaf student in his lip-reading problems by assigning the deaf student classroom with the brightest lighting to make lip reading easier (Schein and Delk, 1974).

11. Disabled Students Center Testing Services: The Center will arrange for a proctor to administer your examination and will attest to the integrity of the results (Special Education Advisory Committee, 1986).

12. Request For Proctoring Service Form: The request for proctoring will be made in accordance with federal and state laws and regulations which govern support services to students with disabilities (Federal Register, 1977).